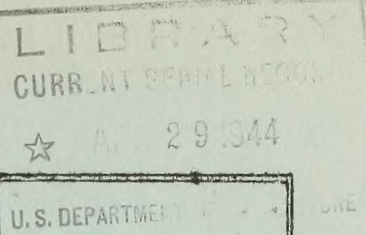


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A SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for the
MISSOURI and ARKANSAS
DRAINAGE BASINS

April 1, 1944

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Issued by the
United States Department of Agriculture
Soil Conservation Service
Division of Irrigation
In Cooperation with
The Colorado Agricultural Experiment Station
Colorado State College
Fort Collins, Colorado

April 10, 1944

SNOW SURVEYS AND IRRIGATION WATER FORECASTS FOR MISSOURI AND ARKANSAS RIVERS

April 1, 1944

The following data pertaining to snow surveys and irrigation water-supply forecasts are provided by the Division of Irrigation, Soil Conservation Service, of the U. S. Department of Agriculture, in cooperation with State departments, other Federal bureaus and local organizations. The snow measurements are made principally by field personnel of the following organizations: Forest Service, National Park Service, Bureau of Reclamation, U. S. Geological Survey, War Department and State Experiment Stations. This work is otherwise conducted cooperatively with the State Engineers of Colorado, Nebraska and Wyoming, and various municipalities, irrigation associations, power companies and others. Precipitation records are supplied by the U. S. Weather Bureau.

P R E C I P I T A T I O N D A T A

WATERSHED	STATE	Precipitation October 1 to March 31	Departure from Normal		Precipitation March	Departure from Normal	
			Inches	Inches		Inches	Inches
Missouri	East. Mont.	3.29	-0.41	0.76	-0.03		
Missouri	Cent. Mont.	3.28	-1.31	0.93	+0.07		
Missouri	North. Wyo.	8.08	-1.11	1.86	-0.03		
North Platte	Wyoming	5.39	-0.21	2.20	+1.06		
South Platte	Colorado	6.17	-0.16	3.13	-1.56		
Arkansas	Colorado	6.00	+0.26	2.22	+0.85		

Precipitation on the watersheds of the North and South Platte and the Arkansas was considerably above normal during March. It was about normal on the watershed of the Missouri and its tributaries in Montana and northern Wyoming. However, the accumulated precipitation from October 1 to March 31, is still below normal on all watersheds except the Arkansas.

SUMMARY OF APRIL 1 SNOW SURVEYS AND COMPARISON OF DATA WITH THOSE OF PREVIOUS YEARS BY WATERSHEDS

WATERSHEDS	Snow Depth		Water Content		Number courses in average	Snow Density		1944 Water Content in Percent of	1943
	Nine year Avg.*	1943	1944	Nine year Avg. @	1943	1944	Nine year Avg. @ Percent	1943	1944
MISSOURI RIVER	In.	In.	In.	In.	In.	In.	Percent	Percent	Percent
Jefferson River	36.7	49.2	35.6	11.2	17.2	9.1	31	35	25
Madison River	50.5	78.0	44.5	18.1	29.7	13.0	36	38	29
Gallatin River	33.6	32.4	41.3	9.9	11.0	10.4	29	34	25
Missouri River**	28.1	35.6	28.3	7.9	11.0	7.2	28	31	25
Marías River	36.9	60.0	31.5	12.6	20.5	9.0	34	34	29
Yellowstone River	30.7	45.2	31.8	8.6	15.0	7.6	28	33	24
Milk River	18.2	14.3	20.1	6.4	6.2	7.1	35	43	35
Shoshone River	51.6	80.4	46.9	15.8	31.0	13.6	31	39	29
Bighorn River	36.4	53.0	35.9	10.3	18.5	9.1	28	35	25
Tongue River	15.4	8.7	27.2	3.4	1.6	5.1	22	18	19
Powder River	26.2	34.0	30.2	5.8	9.4	5.7	22	28	19
North Platte River	54.7	55.2	55.0	18.0	19.9	13.8	33	36	25
Sweetwater River	40.2	57.1	43.6	11.1	19.9	12.0	28	35	28
Laramie River	38.0	43.2	41.1	11.5	15.0	10.2	30	35	25
Cheyenne River	--	--	32.4	--	--	8.2	--	--	25
South Platte River***	23.7	28.1	24.4	6.0	8.7	5.3	26	31	23
Crow Creek	14.2	3.9	25.7	4.1	1.1	6.0	29	28	23
Poudre River	40.0	43.8	39.7	12.3	15.0	9.9	31	34	25
Sig Thompson River	50.9	57.3	47.6	15.2	19.6	11.4	30	34	24
St. Vrain River	44.9	56.4	41.0	13.2	20.2	9.5	29	36	23
Boulder Creek	34.0	36.0	38.8	11.0	14.3	10.4	32	40	27
Clear Creek	50.2	58.0	46.0	15.0	21.0	12.0	30	36	26
ARKANSAS RIVER	35.1	33.3	32.8	10.3	10.8	9.2	29	32	28
					10				89
									85

*Some for shorter periods.

**Headwaters of Missouri River

***Above Denver, Colorado.

WATER SUPPLY OUTLOOK

MONTANA

MISSOURI RIVER AND TRIBUTARIES. The water content of the snow cover, at this time, over the headwaters of these streams averages about 85 percent of the past 9-year April first average. For the headwaters of the Missouri the water content, in comparison with this 9-year average, is 90 percent, Jefferson 80 percent, Madison 70, Marias 70, Yellowstone 90 and the Gallatin 105. Last year's snow cover over southern Montana, and in the Yellowstone Park especially, was abnormally heavy and the resulting runoff much above normal. It is expected that this season's stream flow will be generally about normal with the exception of the Gallatin which will likely be above normal and approximate last year's flow. The runoff in Milk River will likewise be above normal. Extreme high water during the snow melting period is not expected for any of these Montana streams. Reservoir storage is generally good with prospects of further accumulations before the start of the irrigation season. Throughout the irrigated areas in these valleys the soil moisture is now fair to good, stream flow about normal. Range and crop conditions good. The outlook for the coming season's irrigation water supply is quite favorable from the standpoint of snow cover and because of the reservoir storage now available, there will be ample water to meet the irrigation needs with a possible shortage late in the season.

WYOMING

SHOSHONE. The recent snow surveys on the headwaters of Shoshone show the water content of the snow cover to be about 25 percent of that a year ago and 85 percent of the past 9-year average. The runoff will fall far short of last year's total flow but will be sufficient to fill the Shoshone Reservoir which now holds 311,500 acre-feet or at about 70 percent of capacity. The outlook for the coming season is quite favorable at this time. The water supply will be ample to meet the irrigation needs and no shortage will occur, however, the draft on storage will be greater this season in meeting the demand for late irrigation. Soil moisture over the Shoshone Project is fair to good at this time and stream flow below normal.

BIG HORN. The snow cover on this drainage is only about one-half in comparison with last year and indicates that this season's runoff will be much less than it was in 1943. At Brook's Lake the present water content of the snow is 17 inches and on Togwotee Pass 20, last year it was 37 and 43 respectively. In Bull Lake and Pilot Butte the combined storage totals 101,000 acre-feet in comparison with 63,000 a year ago. The small reservoirs near Fort Washakie now equal the storage of last year, 8,100 acre-feet. Generally the soil moisture throughout the Wind and Big Horn valleys is good and range conditions also good due to the all-winter snow cover. Stream flow is somewhat below normal but now improving due to the snow melt at lower elevations. The outlook for the coming season's irrigation supply is not especially good when based on the present amount of snow in the mountains but since the reservoir storage is of a substantial amount no serious shortage in the irrigation supply will occur this season.

POWDER AND TONGUE RIVERS. The water content of the snow on these two drainages is now roughly one-half the amount a year ago. Along the valleys of these streams the soil moisture is only fair and stream flow below normal. It is expected that the coming runoff will be sufficient to fill most of the smaller reservoirs fed from these rivers. The coming season's runoff will likely be below normal unless the April and May precipitation results in a substantial increase in the snow cover on the headwaters of these streams.

NORTH PLATTE RIVER. On the headwaters of this stream and its tributaries the present water content of the snow is about 70 percent of the amount April 1st last year. The discharge of this stream at Saratoga for the coming April-July period is estimated to be 400,000 acre-feet. Last year for this same period it was 579,000. The water content of the snow at Old Battle and North French Creek, both at high elevations, averages 24 inches and a year ago it was 37. Storage in the principal reservoirs on the river is now 587,000 acre-feet, a year ago it was 662,000. The present amount of storage is quite substantial as supplemental to the expected lesser flow of the river in meeting the irrigation needs this coming season. Ample water will be available for irrigation this year except a possible moderate shortage late in the season. Minatare and Lake Alice on the Pathfinder Project in western Nebraska have in storage about 15,000 acre-feet or slightly less than one-half the amount last year at this time. Throughout the North Platte valley in both Wyoming and Nebraska the soil moisture over the irrigated area is good to excellent due to the general all-winter snow cover. Range and crop conditions are generally good and stream flow for the most part normal.

SWEETWATER RIVER. The coming runoff in this stream is expected to reach about three-quarter that of last year. A heavy snow cover now exists on the Green and Farris ranges which will add materially to the coming early June runoff in this river. The soil moisture in the upper Sweetwater valley is very good and because of persistent cold weather the stream flow is subnormal.

LARAMIE RIVER. For this drainage the water content of the snow is likewise only 70 percent of last year and about 90 percent of the past nine-year average. Recent storms have very materially improved the outlook for the approaching irrigation season. It is estimated that the runoff at Helm, April-July, 1944, will be 68,000 acre-feet. Last year the flow totaled 97,000 for the same 4-month period. The irrigated area in the Laramie valley now has good soil moisture, the stream flow is normal and because of the snow cover during the past months, the range and crop conditions are fair to good. No shortage in the irrigation water supply is anticipated during the major portion of the season. Late water supply may be deficient.

SOUTH DAKOTA

The snow fall in the Black Hills this winter has been heavy and melting is now occurring with a substantial runoff. Soil moisture is good throughout the irrigated area. The snow covered ranges during the winter have placed a heavy burden in providing feed for livestock. There will be an above normal runoff this season from the Hills. Reservoirs will fill to capacity and the demand for irrigation will be fully met except the possibility of moderate shortage in the late season.

COLORADO

SOUTH PLATTE. Over this drainage, including the many tributaries, the water content of the snow averages about 60 percent of the amount a year ago, the Boulder watershed the greatest having 75 percent and the St. Vrain the least with about 50 percent. The overall condition being about 80 percent of the past nine-year average. The reservoir storage throughout the whole drainage as compared with last year at this time is for the upper Platte 82 percent, lower Platte 94, Poudre 75, Big Thompson 67, St. Vrain 60 and the Boulder 106. The expected runoff in the Poudre, April-July 1944, will be 200,000 acre-feet. Last year for this same 4-month period it was 263,000. For the St. Vrain the coming flow April-July will be 60,000 acre-feet, last year it was 82,000, and for Clear Creek 125,000 acre-feet. (The April-July 1943, Clear Creek not available). The soil moisture and range conditions are generally good over the entire irrigated area of the South Platte drainage. The overall outlook for the coming season's irrigation supply is fair to good. The streams will reach normal stage during the peak runoff but will not be sustained. Late water will be moderately short with a heavy draft on reservoir storage.

ARKANSAS. On the headwaters of the Arkansas the present water content of the snow is about 85 percent of that a year ago and is 90 percent of the 9-year average. Reservoir storage is now a little less than one-half the amount last year at this time. Unless heavy precipitation occurs during the next two months over this drainage area, not much additional storage will be realized for use this coming season. The winter snows over the valley area have left the irrigated section with good to excellent soil moisture. Spring planting is somewhat delayed because of wet weather. Crop conditions are now good. The outlook for the coming season's water supply for irrigation is quite favorable. The coming April-July runoff at Salida is estimated to be 240,000 acre-feet. Last year it was 343,000. The river stage at maximum snow melt will reach a normal peak and as the season advances the flow will decrease more rapidly than last year. The supply during the late season will probably be short. The storage now available will be largely consumed at the close of the irrigation season.

MISSOURI AND ARKANSAS RIVER WATERSHEDS
Summary of Federal and State Cooperative Snow Surveys
Issued April 10, 1944, at Fort Collins, Colo.

No.	Main Drainage and Snow Course	Local Drainage	Location		Elev.	National Forest	April 1 Snow Cover Measurements									
			State	Locality			Descrip- tion	In.	In.	1943	1944	Av. @	1943	In.	1944	Av. @
6	Camp Creek*	Red Rock Cr.	Idaho	6mi. N. Spencer	6800	Targhee	21-13N-36E	29.6	32.1	32.1	34.7	8.5	9.9	In.	In.	9.3
7	Moose Creek*	N. Fk. Big Hole	"	3mi. S. Gibbons P.	6200	Salmon	27-27N-21E	40.4	59.2	59.2	37.0	13.3	23.3	9.6	9.2	9.2
7	East Fork R. S.*	Rock Creek	Mont.	13mi. NE. Sula	5400	Bitterroot	16-2N-17W	--	27.6	27.6	--	--	--	--	--	--
10	Gibbons Pass	N. Fk. Big Hole	"	Gibbons Pass	7100	"	4-2S-19W	55.4	78.5	78.5	53.7	19.6	28.8	14.9	14.9	14.9
30	Pipestone Pass	Pipestone Cr.	"	Pipestone Pass	7200	Deer Lodge	11-1N-7W	18.4	24.2	24.2	17.0	4.9	6.5	4.6	4.6	4.6
	Elkhorn Hot Spgs.	Wise River	"	8mi. N. Polaris	8450	Beaverhead	15-4S-12W	29.5	43.4	43.4	27.2	7.9	14.2	6.4	6.4	6.4
31	Storm Lake	Seymour Cr.	"	15mi. W. Anaconda	8100	Deer Lodge	19-4N-13W	46.7	57.9	57.9	44.0	13.2	20.2	10.3	10.3	10.3
							Average for Drainage	36.7	49.2	49.2	35.6	11.2	17.2	9.1	9.1	9.1
MADISON RIVER																
2	Astor Creek**	Firehole R.	Wyo.	Lewis Lake	7700	Yel. Nat. P.	44-3N-110.6W	75.4	130.0	130.0	60.9	27.4	50.5	18.3	18.3	18.3
8	Lewis L. Divide**	"	"	3mi. S. Lewis L.	7900	"	44-2N-110.7W	100.7	155.0	155.0	74.2	38.6	62.6	24.4	24.4	24.4
11	Norris Basin	Gibbon River	"	Norris Basin	7500	"	44-3N-110.7W	29.3	43.7	43.7	32.8	8.8	15.6	8.8	8.8	8.8
3	Big Springs*	South Fork	Idaho	Big Springs	6500	Targhee	34-14N-44E	40.6	75.6	75.6	51.9	18.7	30.0	15.2	15.2	15.2
16	West Yellowstone	South Fork	Mont.	W. Yellowstone	6700	Gallatin	34-13S-5E	32.4	49.6	49.6	24.4	10.8	18.3	7.1	7.1	7.1
	Twenty-one Mile*	Greyling Cr.	"	8mi. S. Gallatin	7150	Yel. Nat. P.	1-11S-5E	46.6	68.5	68.5	42.6	15.5	24.7	12.0	12.0	12.0
	Hebgen Dam	Cabin Creek	"	Hebgen Dam	6550	Gallatin	22-11S-3E	35.4	43.4	43.4	28.8	11.6	14.6	7.8	7.8	7.8
	Valley View	Denny Cr.	Idaho	5mi. E. Henry's L.	6500	Targhee	7-15N-44E	43.5	57.5	57.5	40.6	13.5	21.1	10.5	10.5	10.5
							Average for Drainage	50.5	78.0	78.0	44.5	18.1	29.7	13.0	13.0	13.0
GALLATIN RIVER																
	Devil's Slide	Hyalite Cr.	Mont.	20mi. S. Bozeman	8100	Gallatin	14-5S-6E	58.7	60.4	60.4	64.6	17.8	20.6	16.2	16.2	16.2
	Hood Meadow Extn.	"	"	14mi. "	6600	"	22-4S-6E	26.7	27.9	27.9	36.3	7.1	8.0	8.5	8.5	8.5
	Mystic Lake No. 1	Bozeman Cr.	"	12mi. SE. "	6600	"	31-3S-7E	22.7	14.5	14.5	35.7	6.6	5.3	9.6	9.6	9.6
	Mystic Lake No. 2	"	"	"	6600	"	31-3S-7E	23.3	15.3	15.3	35.8	6.2	5.1	8.2	8.2	8.2
	Twenty-one Mile	Gallatin River	"	8mi. S. Gallatin	7150	Yel. Nat. P.	1-11S-5E	46.6	68.5	68.5	42.6	15.5	24.7	12.0	12.0	12.0
	Ross Peak	Ross Cr.	"	12mi. N. Bozeman	7000	Gallatin	10-1N-6E	23.7	17.5	17.5	28.7	6.1	4.9	6.3	6.3	6.3
	New World Trail	Gallatin River	"	8mi. SE. "	7000	"	13-3S-6E	33.7	22.4	22.4	45.6	10.0	8.3	12.1	12.1	12.1
							Average for Drainage	33.3	32.4	32.4	41.3	9.9	11.0	10.4	10.4	10.4

*On adjacent drainage

**Readings March 15

Average for period of record

MISSOURI AND ARKANSAS RIVER WATERSHEDS

Summary of Federal and State Cooperative Snow Surveys

Issued April 10, 1944, at Fort Collins, Colo.

No.	Main Drainage and Snow Course	Local Drainage	State	Location		Elev.	Apr. 1 Snow Cover Measurements			
				Locality	Description		Av. Snow Depth	Av. Water Content	1943	1944
							In.	In.	In.	In.
MISSOURI RIVER										
6	Chessman Res.	Tennile	Mont.	11mi. SW. Helena	2-8N-5W	6200	Helena	Helena	15.3	20.4
11	Goat Mountain	South Fork	"	26mi. W. Gilman	47-5N12-9W	7000	Lewis & Clark	Lewis & Clark	26.0	52.3
36	Stemple Pass	Canyon Creek	"	Stemple Pass	16-13N-7W	6900	Helena	Helena	29.1	45.6
41	Tennile Cr. Lower	Tennile	"	17mi. SW. Helena	13-8N-6W	6250	"	"	21.6	30.2
42	Tennile Cr. Middle	"	"	"	13-8N-6W	6800	"	"	34.0	42.6
43	Tennile Cr. Upper	"	"	"	19-8N-5W	8000	"	"	39.9	51.4
	Grasshopper	Grasshopper Cr.	"	6mi. S.W. S. Spgs.	19-9N-8E	7000	Lewis & Clark	Lewis & Clark	19.7	24.4
	King's Hill	Belt Creek	"	21mi. N.W. S. Spgs.	35-13N-7E	7950	"	"	39.9	44.6
	Orville Harris	Mussellshell R.	"	12mi. E.W. S. Spgs.	31-10N-9E	6500	"	"	19.1	21.5
	Half Moon	Judith River	"	19mi. S. Lewiston	22-12N-18E	6000	"	"	24.7	24.3
	Crystal Lake	Flat Willow Cr.	"	18mi. SE.	24-12N-17E	5500	"	"	39.8	34.5
					Average	for Drainage			28.1	35.6
MARIA'S RIVER										
7	Desert Mountain*	Outbank Cr.	Mont.	4mi. S. Belton	24-31N-19W	5600	Flat Head	Flat Head	35.1	53.8
20	Marias Pass	Two Medicine	"	Summit	48-3W113-4W	5250	Glacier NF	Glacier NF	38.7	66.3
					Average	for Drainage			36.9	60.0
YELLOWSTONE RIVER										
14	Dome Lake	Goose Creek	Wyo.	Dome Lake	11-53N-87W	8800	Big Horn	Big Horn	26.6	--
40	Lupine Creek	Lupine Creek	"	11mi. SE. Gardiner	44-9N110-6W	7300	Yel. Nat. P.	Yel. Nat. P.	--	48.3
41	Blacktail Deer Cr	Blk. Tail Deer	"	11mi. "	44-9N110-6W	7500	"	"	--	52.3
43	Lodge Pole	Lodge Pole Cr.	"	34mi. NW. Cody	32-56N-106W	8200	Shoshone	Shoshone	34.0	57.8
	Camp Senia	W. Br. Rock Cr.	Mont.	10mi. W. Red Ldg.	2-8S-18E	7370	Guster	Guster	28.3	40.7
3	Canyon	Tower Creek	Wyo.	8mi. N. Canyon Jct	44-7N110-5W	7750	Yel. Nat. P.	Yel. Nat. P.	36.8	57.8
	Cooke City	Soda Butte Cr.	Mont.	Cooke City	25-9S-14E	7400	Absaroka	Absaroka	25.9	43.2
	Crevice Mtn. #1	Yellowstone	"	6mi. E. Gardiner	26-9S-9E	8400	Yel. Nat. P.	Yel. Nat. P.	35.4	46.8
	Crevice Mtn. #2	"	"	7mi. E. "	25-9S-9E	8200	"	"	35.4	45.9
7	Lake Camp	"	Wyo.	3mi. NE. Fish. Br.	44-6N110-4W	7350	"	"	34.2	60.5
	Porcupine	Porcupine Cr.	Mont.	12mi. NE. Wilsall	10-4N-10E	6500	Absaroka	Absaroka	16.9	16.9
	Hell's Canyon	Boulder Cr.	"	26mi. SE. Livestn	23-5S-12E	6000	"	"	9.4	10.5
	Independence	"	"	26mi. NE. Gardiner	22-7S-12E	8000	"	"	53.0	71.5
					Average	for Drainage			30.7	45.2
MILK RIVER										
	Rocky Boy	Milk River	Mont.	Bear Paw Mt.	15-28N-16E	--	Off Forest	Off Forest	18.2	14.3

*Adjacent Drainage

©Average for period of record

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Main Drainage and No. Snow Course	Local Drainage	State	Location Locality	Descrip- tion	Elev.	National Forest	Apr. 1 Snow Cover Measurements			
							Av. Snow	Depth	Av. Water	Content
							Av. ©	1943	1944	1944
							In.	In.	In.	In.
SHOSHONE RIVER										
32	Sylvan Pass	Wyo.	Sylvan Pass	12-52N-110W	7100	Yel. Nat. P.	42.2	69.3	37.4	12.7
33	Up. Hardpan Basin	"	27mi. SW. Cody	25-51N-106W	9500	Shoshone	---	61.6	41.5	---
50	Brooks Lake #3*	"	Brooks Lake	23-44N-110W	9200	Washakie	61.1	91.5	56.4	18.3
				Average for Drainage			51.6	80.4	46.9	15.8
										31.0
										13.6
BIGHORN RIVER										
12	Togwotee Pass	Wyo.	Togwotee Pass	29-44N-110W	9600	Teton	74.6	100.0	71.0	26.0
13	Tensleep R.S.	"	15mi. NE. Tensleep	30-49N-86W	8300	Bighorn	30.1	32.9	36.1	6.7
16	Ranger Creek	"	14mi. E. Shell	32-53N-88W	8300	"	33.8	40.3	37.8	7.6
14	Dome Lake*	"	Dome Lake	11-53N-87W	8800	Bighorn	26.6	---	36.5	7.0
45	Sawmill Glade	"	13mi. SW. Lander	3-31N-101W	8500	Washakie	25.9	30.5	36.0	6.2
46	Blue Ridge	"	15mi. " "	23-31N-101W	9500	"	34.2	48.7	41.9	9.4
47	South Pass	"	19mi. " "	13-30N-101W	9000	"	40.0	57.2	42.5	11.3
48	Wood River	"	42mi. SW. Cody	28-46N-103W	8000	Shoshone	20.6	34.2	23.7	5.4
49	Sheridan Cr. R.S. #2	"	16mi. NW. Dubois	3-42N-109W	7500	Washakie	23.2	46.8	16.1	6.0
50	Brooks Lake #3	"	Brooks Lake	23-44N-110W	9200	"	61.1	91.5	56.4	18.8
51	St. Lawrence R.S.	"	27mi. NW. Lander	26-1N-4W	9000	Shos. I. R.	30.3	43.2	25.3	8.0
52	Mosquito Park R.S.	"	18mi. " "	23-28-3W	9500	"	39.0	48.3	41.7	10.5
53	DuToit	"	9mi. NW. Dubois	27-42N-108W	8750	Washakie	34.5	56.7	23.8	10.2
54	T-Cross Ranch	"	12mi. N. Dubois	1-43N-107W	8000	"	25.9	59.0	14.5	7.9
				Average for Drainage			36.4	53.0	35.9	10.3
										18.5
										9.1
TONGUE RIVER										
14	Dome Lake	Wyo.	Dome Lake	11-53N-87W	8800	Bighorn	26.6	---	36.5	7.0
17	Big Goose Cr. R.S.	"	20mi. SW. Sheridan	4-53N-86W	7700	"	15.4	8.7	27.2	3.4
				Average for Drainage			15.4	8.7	27.2	3.4
										1.6
										5.1
POWDER RIVER										
30	Red Fork	Wyo.	23mi. W. Kaycee	18-47N-85W	7500	Off Forest	27.2	32.3	36.3	6.4
31	Sour Dough	"	10mi. W. Klondike	17-49N-84W	8500	Bighorn	25.3	35.6	24.0	5.2
				Average for Drainage			26.2	34.0	30.2	5.8
										9.4
										5.7

*On adjacent drainage

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Main Drainage and No. Snow Course		Local Drainage	State	Location	Description	Elev.	National Forest	Apr. 1 Snow Cover Measurements			
								Av. Snow Depth	Av. Water Content		
								1943	1944	1943	1944
								In.	In.	In.	In.
NORTH PLATTE RIVER											
1	Cameron Pass	Michigan Cr.	Colo.	Cameron Pass	2-6N-76W	10300	Roosevelt	60.9	53.4	58.3	20.4
7	Park View	Illinois Cr.	"	7mi. SE. Rand	24-5N-78W	9200	Routt	34.0	29.7	32.3	10.3
8	Columbine Lodge	Grizzly Cr.	"	Rbt. Ears Pass	21-5N-82W	9300	"	64.8	72.0	68.0	21.6
51	Big Creek Lake	Big Creek	"	5mi. SW. Pearl	9-11N-82W	9000	"	35.4	39.5	36.6	10.4
62	Willow Creek P.*	Illinois Cr.	"	Willow Cr. Pass	1-4N-78W	9500	Arapaho	42.4	41.0	37.0	12.2
7	Bottle Creek	Encampmt Cr.	Wyo.	7mi. SW. Encampmt	24-14N-85W	8200	Medicine Bow	43.3	44.8	39.9	13.9
8	Webber Spring	"	"	10mi. S.	27-14N-85W	9000	"	55.6	57.2	51.6	18.6
9	Old Battle	"	"	12mi. W	29-14N-85W	9300	"	84.9	89.5	81.5	30.3
37	North French Cr.	N. French Cr.	"	Cent/Saratoga	27-16N-80W	10200	"	80.8	87.1	87.5	29.5
38	N. Barrett Cr. #2	Barrett Cr.	"	"	30-16N-80W	9400	"	61.6	60.1	70.2	19.8
39	Ryan Park #2	"	"	"	34-16N-81W	8400	"	38.3	32.8	42.1	10.9
					Average for Drainage			54.7	55.2	55.0	18.0
SWEETWATER RIVER											
29	Grannier Meadows	Rock Creek	Wyo.	20mi. SW. Lander	19-30N-100W	9000	Washakie	40.5	57.0	44.7	10.9
47	South Pass	"	"	19mi. "	13-30N-101W	9000	"	40.0	57.2	42.5	11.3
					Average for Drainage			40.2	57.1	43.6	11.1
LARAMIE RIVER											
3	Brooklyn Lake	Nash Fork	Wyo.	7mi. NW. Centennial	11-16N-79W	10200	Medicine Bow	59.5	67.0	59.0	20.5
11	Fox Park	Fox Creek	"	Fox Park	21-13N-78W	9200	"	32.6	29.1	40.9	9.4
34	Pole Mountain #2*	Soldier Cr.	"	10mi. SE. Laramie	35-15N-72W	8700	"	14.2	3.9	25.7	4.1
35	Libby Lodge #2	Libby Creek	"	3mi. NW. Centennial	29-16N-78W	8700	"	27.6	34.3	29.4	8.1
36	Hairpin Turn #2	Nash Fork	"	5mi. NW.	24-16N-79W	9500	"	35.8	48.0	33.0	10.5
4	W. Port. G-P. Tunnel	Laramie R.	Colo.	4mi. N. Chambers L.	7--8N-75W	8600	Roosevelt	30.6	37.6	30.1	9.1
50	Deadman Hill*	Deadman Cr.	"	10mi. W. R. Feather	26-10N-75W	10200	"	45.9	57.9	48.1	13.2
71	Deadman Hill #2*	Deadman Cr.	"	8mi. SW.	6-9N-74W	10200	"	38.6	49.0	40.5	10.9
88	Roach	LaGarde Cr.	"	8mi. NW. Glendevoy	5-10N-77W	9800	"	56.9	62.0	63.0	17.6
					Average for Drainage			38.0	43.2	41.1	11.5

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							Av. Snow Depth	Av. Water Content	1943	1944
							In.	In.	In.	In.
CHEYENNE RIVER										
1	Upper Spearfish	"	Spearfish Cr. S. Dak.	21mi. SW. Spearfish	6500	Black Hill	---	---	---	9.2
2	Upper Castle	"	Castle Cr.	11mi. NW. Deerfield	6800	"	---	---	---	9.2
3	Deerfield	"	Silver Cr.	3mi. NW. Deerfield	6010	"	---	---	---	6.2
				Average for Drainage			32.4			8.2
SOUTH PLATTE RIVER										
14	Hoosier Pass	Colo.	S. Platte R.	Hoosier Pass	11400	Pike	42.4	47.4	11.9	16.0
15	Fairplay	"	"	Fairplay	10000	"	4.0	0.0	0.7	0.0
83	Jefferson Cr. #2	"	Jefferson Cr.	5mi. NW. Jefferson	10100	"	21.6	36.8	5.3	10.2
				Average for Drainage			22.7	28.1	6.0	8.7
CROW CREEK										
34	Pole Mountain #2	Wyo.	Crow Creek	10mi. SE. Laramie	8700	Medicine Bowl	4.2	3.9	4.1	1.1
POUDRE RIVER										
1	Cameron Pass	Colo.	Joe Wright Cr.	Cameron Pass	10300	Roosevelt	60.9	53.4	20.4	20.3
2	Chambers Lake	"	Poudre River	Chambers Lake	9000	"	23.0	29.1	7.3	9.2
3	Big South	"	"	2mi. E. Chambers L.	8600	"	8.7	8.9	2.2	3.3
50	Deadman Hill	"	N. Poudre R.	10mi. W. R. Feather	10200	"	45.9	57.9	13.2	18.7
65	Lake Irene*	"	Big S. Poudre	1mi. SW. Milner P.	10600	Ry. Mtn. N. P.	62.7	64.4	19.7	23.0
68	Hour Glass Lake	"	L. S. Poudre	2mi. NW. Pingree P.	9500	Roosevelt	---	41.1	---	14.6
71	Deadman Hill #2	"	N. Poudre R.	8mi. SW. R. Feather	10200	"	38.6	49.0	10.9	15.7
				Average for Drainage			40.0	43.8	12.3	15.0
BIG THOMPSON										
65	Lake Irene*	Colo.	Big Thompson R.	1mi. SW. Milner P.	10600	Ry. Mtn. N. P.	62.7	64.4	19.7	23.0
95	Hidden Valley #2	"	Hidden Val. Cr.	9mi. W. Estes P.	9550	"	39.1	50.2	10.7	16.1
				Average for Drainage			50.9	57.3	15.2	19.6

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								Av. Snow Depth	Av. Water Content	1943	1944	1944	1944
No.								Av. @	In.	In.	In.	In.	In.
41	St. VRAIN RIVER Wild Basin	N. St. Vrain R.	Colo.	5 mi. W. Allens P.	24-3N-74W	10000	Ry. Mtn. N.P.	44.9	56.4	41.0	13.2	20.2	9.5
5	BOULDER CREEK E. Port. Moffat T.	S. Boulder Cr.	Colo.	East Portal	2-2S-74W	9400	Roosevelt	10.6	0.0	17.6	2.9	0.0	4.1
60	University Camp #2	N. Boulder Cr.	"	5 mi. SW. Ward	28-1N-73W	10300	"	57.5	71.9	60.1	19.2	28.6	16.6
					Average for Drainage			34.0	36.0	38.8	11.0	14.3	10.4
61	CLEAR CREEK Loveland Pass #2	Clear Creek	Colo.	10 mi. W. Georgetown	27-4S-76W	10100	Arapaho	45.9	51.2	44.5	13.3	17.9	11.4
97	Grizzly Peak*	"	"	1 mi. W. Loveland P.	2-5S-76W	11250	"	54.6	64.8	47.6	16.7	24.1	12.7
					Average for Drainage			50.2	58.0	46.0	15.0	21.0	12.0
19	ARKANSAS RIVER Tennessee Pass	Tennessee Cr.	Colo.	Tennessee Pass	21-8S-80W	10200	Cochetopa	35.4	31.3	30.3	9.2	11.0	8.2
21	Twin Lakes Fun.	Lake Creek	"	9 mi. W. Twin Lakes	22-11S-82W	10500	"	37.3	39.4	32.2	10.0	12.8	8.3
42	Marshall Creek*	Poncha Cr.	"	Marshall Pass	24-48N-6E	10800	"	46.4	47.8	41.9	13.7	15.0	12.1
43	Poncha Creek	"	"	"	19-48N-7E	10500	"	37.6	40.9	33.6	11.6	13.3	10.4
72	Whiskey Creek #2	Whiskey Cr.	"	Whiskey Cr. Pass	37-2N105-2W	10300	Maxwell Gr.	24.7	11.3	21.2	7.4	3.8	7.2
74	LaVeta Pass #2*	Cuchara Cr.	"	LaVeta Pass	22-28S-70W	9300	San Cristobal	26.0	19.3	30.4	7.7	4.7	9.8
78	Four Mile Park #2	Lake Creek	"	3 mi. SW. Twin L.	23-11S-81W	9700	Cochetopa	11.1	11.8	17.4	3.0	3.4	4.4
79	Fremont Pass #2	E. Fork Ark. R.	"	Fremont Pass	2-8S-79W	11400	Arapaho	52.3	61.8	43.3	16.0	20.1	10.9
81	Blue Lakes #2	Cuchara Cr.	"	15 mi. SW. LaVeta	30-31S-69W	10000	San Isabel	21.4	10.1	22.5	5.6	2.7	6.2
92	Monarch Pass	S. Fork Ark. R.	"	Monarch Pass	16-49N-6E	10500	Cochetopa	59.1	59.4	55.2	18.4	20.8	14.5
					Average for Drainage			35.1	33.3	32.8	10.3	10.8	9.2

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